<u>REMARKS</u>

Applicants appreciate the examination of the present application that is evidenced by the Official Action of June 16, 2006 and the indication that Claims 23-27 are allowed. Nonetheless, Applicants respectfully request reconsideration of the claim rejections under 35 USC § 112. To support these rejections, the Examiner has maintained that "[i]t is not clear how or why there would be a duplicate learn operation to a same search key since the first learn operation would prevent a miss for a second or subsequent search operation to the same search key." (Official Action, p. 2 to p. 3). Applicants respectfully disagree with this assertion by the Examiner. As explained at page 27, line 18 to page 28, line 4 of the present application, a sufficiently long instruction latency can cause duplicate learn operations to occur within a single or cascaded chain of CAM devices:

> "... In particular, as the latency of processing through a CAM core (or multiple CAM devices within a cascaded chain) increases, the number of cycles that may be spaced between two equivalent learn instructions that are likely to cause a duplicate learn event also typically increases. Accordingly, even timing conditions that do not represent worst case timing conditions (i.e., immediately consecutive learn instructions) may contribute to duplicate learn events in conventional search engine devices." (See, e.g., Application, p. 27, line 28 to p. 28, line 4).

The application also provides a detailed explanation at pages 28-31 and FIGS. 10 and 11A-11H on how to handle closely spaced search-and-learn (SNL) instructions that are duplicate. (See, e.g., FIG. 11A, which shows how two SNL instructions with the same search key are received and processed). When this occurs, the second SNL instruction is converted to a SNS (search-and-search) instruction to prevent duplicate learning:

> " ... Accordingly, rather than having two SNL instructions result in duplicate learning events into a database (because they arrive too close in time for the first SNL instruction to take effect before the search portion of the second SNL instruction is performed), the second SNL instruction is
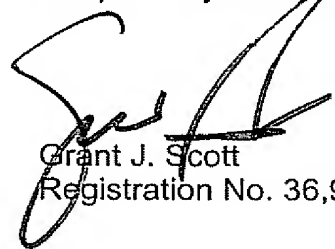
converted into a search and search (SNS) instruction, which results in a hit condition and returns an address of the learned entry back into a results mailbox." (See, e.g., Application, p. 28, line 21-27).

Applicants respectfully submit, therefore, that the specification of the present application properly enables the rejected claims.

Finally, as illustrated and described with respect to Block **1024** in FIG. 10 of the application, a search key can be checked to determine whether it has been "marked as a duplicate," as recited by Claim 12. Applicants acknowledge that this "marking" of the search key may be provided by a "flag" in the illustrated embodiment, but this flag is merely an attribute of the search key itself (i.e., an assigned property of the search key) and so Applicants' believe it is more appropriate to describe the "checking" operation as applying to the search key rather than an arbitrary marker such as a flag.

Based on these arguments, Applicants respectfully submit that all pending claims are in condition for allowance, which is respectfully requested.
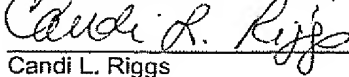
Respectfully submitted,

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I hereby certify that this correspondence is being transmitted electronically to the U.S. Patent and Trademark Office on June 22, 2006.

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